

# USCMS Engineer Status Report for September 2004

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## 1 Work Performed This Month

### Development

#### Publish-Service:

1. Designed a new Runjob/Shahkar based Publish Service, Replacing older EVDSERVICE based Publishing (that was developed during DC04 pressure) all together with a completely new Configurator based modular approach, to satisfy Production and Analysis use cases.
2. Design moulded around PoolRunjob tools already developed by Dave Evans.
3. Implemented following new Configurators,  
AttachConfigurator.py DatasetTools.py GenerateEVDcatFromJobSplit.py  
GetRUNIDFilesFromJobSplitConfigurator.py PoolCatalogProcessor.py PoolMergerConfigurator.py PublishCatalog.py
4. Developed Macro files to support Publishing use cases, PublishService.ctx and Publish\_Assignment/Collection.mcj for Publishing Hit/Digi/DST/DSTStream individual assignments and collection.
5. Standardized Exception handling, and messages. 6. pylint based standardized code. 7. Design document and use cases were written, discussed with McRunjob team at FNAL and CERN. 8. Unit/Integration testing completed successfully, and then a release is made. 9. CERN raised bug reports, asking to support "rfio" protocol for their Publishing. That started a new patch release development, 10. Re-designed the file access/copy protocol is Publish Service to use Meta Broker(s), File and Dir. 11. Implemented new MB based file access in Publish service, making it generic enough to work

with any type of protocol, supported by MB package in ShahKar. 12. MB Package in Shahkar is modified to support DCAP (Dcache) and RFIO protocols, that required adding several classes and functionality to MB package. 13. Publish Package commonalities are merged into a common tool file and a common parent class (POOLThresher) for some of the configurators, that reduces future maintenance overhead. 14. Tested all the functionality locally and at CERN, to satisfy Savannah Bug reports, these will be closed once CERN verifies the changes. 15. MB package changes are included in Shahkar v2.2. 16. Some macro files also changed to support so called "rfio" changes 17. fin082704b, McRunjob, has all publish service changes.

McRunjob Development: I am supporting Publishing done using old code (EVDSservice) after Julai's departure from McRunjob team.

1. Resolved POOL, COBRA issues, that include discussion with Group colleagues, and making changes to EVDSservice package. 2. Looked at changes done by CERN (Nikolay). 3. Cleaned code from up CERN branch, adding new functionality to InputPluginRefDB that included,

- a. GetAllMETA() function setup pool locally now (not using evd service)
- b. Calls migrate catalog, locally (not using evd service)
- c. function to setup pool env is provided.
- d. Bugs return of getJobSplit is fixed.
- e. ImpalaLiteScriptGen.py, scriptobject additem duplication bug.
- f. PublishContext.ctx (added missing 'end' in EVDSservice block).
- g. All Attach Scripts are modified to bring them up to date.
- h. All Production scripts are up to date (including LCG changes too)
- i. I have NOT touched Scheduler.ctx.
- j. tested CMKIN, OSCAR,. Digi, DST job creation, and Digi, DST Publish.

MCPS/MOPService: 1. Started looking at Design, Code base and Apps developed in MCPS package, in lieu with future development for SC2004 demo and beyond. 2. Worked with Dave Evans to design and help implement FBS Submission configurator for MCPS. 3. Designed MOP Submission Configurator for MCPS. 4. Started developing MOP Submission tools for MCPS, initail DAG creation is achieved, work is still in progress.

## 2 Status of Deliverables

1. McRunjob is released with Old EVDSservice supported by me, 2. New Publish Service is included, some of it is already tested, I will be supporting it as well.

### **3 Plans For Next Month**

1. McRunjob is released with Old EVDSservice, will continue supporting it. 2. New Publish Service is included, some of it is already tested, I will be supporting it as well. 3. Will try to cover more Analysis and Production use cases in Publis Service. 4. Work started on MCPS-MOP, Continue to work on MCPS Job submission to GRID via MOP, using Classical MOP and Web Service based MOPService. Support MCPS-MOP development and operations for SC2004 preparations. 5. Interface MOPdb with MCPS/ShREEK (Runtime tools).

### **4 Longer Term Plans**

Will try to explore Globus Toolkit 3.x for WSRF. MCPS-MOP make the job more generic and easily configurable for various hierarchical DAGs. Post/Pre-Script generalized processing for MOP. MOPdb, ShREEK, MCPS (application to Production and Analysis use cases).